

**Between 1931 and 1936 Ethnologist Julian Steward made numerous trip throughout Nevada, southern Idaho, western Utah and the Owens Valley area of California, interviewing native people and recording among other things, a record of the food items used by all the various groups in each of the valleys he visited. Keep in mind that nearly all of the people which he interviewed were in their 70's and 80's – most of whom were born in the 1860's or 70's and who, had gained much of their knowledge from their parents and grandparents.**

**The significance of Julian Steward's work is that, in the hundreds of interviews he concluded with the native people living throughout the Great Basin, it is clearly shown just how scarce game was at that time. Sage grouse are only mentioned once. And that was in the area of Ruby Valley. And the only Elk mentioned were taken in the Yellowstone area.**

SUMMATION OF ANIMAL FOODS USED BY SHOSHONI PEOPLE OF THE GREAT  
BASIN - Julian Steward

There has been a good deal of controversy surrounding questions of actual numbers of wildlife that inhabited the western United State prior to white settlement. Fortunately, there is a good deal of historical information available concerning this issue. One of the best works produced, which can shed light in this regard, was that of Julian Steward. Between 1931 and 1936, Julian Steward made numerous trips throughout Nevada, southern Idaho, western Utah and the Owens Valley area of California, interviewing native people. In addition, Mr. Steward added to his text, comments made by early trappers and explorers which made their way into these areas durring the 1800s. The following information was taken from Mr. Steward's book, BASIN-PLATEAU ABORIGINAL SOCIOPOLITICAL GROUPS, SMITHSONIAN INSTITUTION, BUREAU OF AMERICAN ETHNOLOGY. The information is confined to those comments made concerning the animals which were hunted by the native people during that period.

Even though much of the testimony herein gives the impression that there were many deer, antelope and mountain sheep throughout the region at that time, there was not. Because there is testimony of areas where hunts were held does not mean that these hunts were held at regular intervals, or that they were always successful. The testimony does however indicate that these animals were present even though in very small numbers. That there were very few large wildlife is indicated by the fact that these people had very few lodges for shelter, that moccasins were rare, and that no cradle boards were mentioned. What skins were acquired were most often used for food storage. Even successful rabbit hunts had to have been the exception rather than the norm, for testimony indicates that there were never enough rabbit skin robes for more than a few persons.

Small game was of relatively great importance, Reptiles, rodents, and insects all supplied food. Rodents and other small mammals had several advantages over large game. They remained in restricted localities and did not require a long chase. Insects were sometimes of great importance. In some years grasshoppers and "Mormon crickets" were extremely abundant and could be taken in quantities that would last for months. Overall, plant foods were of the greatest importance; unfortunately, even they were inadequate.

Pine Nuts, or the fruit of *Pinus Monophlla Torr*, was the most important food for most of the tribes that inhabited the Great Basin area of the Western United States. The Indians called the nut "tuba". Even though it was the most important single food species, harvest were unpredictable. According to information gathered by Steward:

Each tree yields but once in 3 or 4 years. In some years there is a good crop throughout the area, in some years virtually none. In other years, some localities yield nuts but others do not. When a good crop occurs, it is far more abundant than the local population can harvest. The cones begin to open in early fall, the nuts first being knocked from the cones with a pole or the cones knocked to the ground then opened by pounding or roasting. Within a few days nuts begin to drop from the cones. The period during which they can be harvested is consequently 2 to 3 weeks, rarely longer; Ruby Valley, it was only 10 days. Had crops been reliable each year, and permitted a longer harvesting period, the harvest would have supported many times the population. Actually, a family sometimes procured enough for 1 year, rarely for 2, and frequently passed two or three winters without pine nuts, living on scanty supplies of other seeds. Cooked nuts might keep 2 years, but usually spoiled after a year. When burned from the cones, nuts were thereby cooked. Those picked up from the ground were stored green, according to OD, because coyotes would eat cooked nuts.

The daily harvest per person varied considerably with the annual yield. Dutcher said 10 or 12 Shoshoni women gathering in the Panamint Mountains got 1 or 2 bushels a day. This would be about 100 to 150 pounds. Ruby Valley informants said a person could pick 200 pounds in 10 days. BG, S-Elko, thought a person could pick not over 50 pounds of pine nuts a day. (From the writer's experience this figure is substantially correct.) Four persons, including BG, once picked 300 pounds in a week, a rate of about 12 1/2 pounds per person per day. At this rate, a family which included four pickers could gather not over 1200 pounds in the probable maximum of 4 weeks during which they could be harvested. Even this figure is probably excessive. The quantity consumed during the winter depended upon use of other foods. If pine nuts were virtually the only food, a person could easily eat 2 pound a day, or about 10 pounds for a family of five. In this case 1200 pound would last but 4 months. And 1200 pounds is probably the maximum crop possible. Consequently, it is not difficult to see why starvation by early spring was very common.

A summary of the animals hunted, for each locality, is as follows.

#### Northern Paiute of Owens Valley

Jack rabbits were taken near Owens River. Antelope were hunted communally. Deer were sometimes hunted communally in the mountains on both sides of the valley. Older men hid by game trails to shoot deer driven by young men. Some deer hunts involved the joint

efforts of several bands. TS's grandfather described a hunt in the Sierra Nevada Mountains west of Owens Lake in which several hundred men from throughout the valley participated.

Mountain sheep were also sometimes hunted communally, especially in the Sierra Nevada Mountains, dogs being used to drive them onto cliffs. Fish were relatively unimportant.

#### Deep Springs Valley Paiute

Deer were hunted mainly in the White Mountains, antelope in the southern end of the valley, either near Antelope Springs or east of Deep Springs Lake, and mountain sheep near the springs or in the mountains east of the lake. Antelope and deer were tracked by individual hunters or taken by groups of 4 or 5 or more men who, aided by fire and perhaps dogs, drove them past hidden archers. Sheep were either stalked in the mountains or shot from stone blinds near the springs. Ducks were shot in the sloughs east of the lake. Rabbits were driven into nets during community hunts.

#### Fish Lake Valley Paiute

Animal foods were of secondary importance. Meat from lesser animals such as fish, lizards, rodents, and caterpillars, was usually consumed at once. Deer were usually procured in the White Mountains, antelope in the plains at the western base of the Silver Peak Range, mountain sheep in the mountains east and south of Deep Springs Valley, and rabbits within a few miles of the various streams in Fish Lake Valley. When hunts were communal, some men beat the brush, while others, usually older men, hid by game trails.

#### Lida and Vicinity

Testimony was somewhat contradictory. Lida area population, though predominantly Shoshoni, was linked with Fish Lake Valley Paiute and the Gold Mountain, Stonewall Valley, and Clayton Valley Shoshoni.

Deer, sheep, antelope, and small game could be hunted within no great distance of Lida, There were few antelope. JS knew of communal rabbit hunts only in comparatively recent times, held near Oasis in Fish Lake Valley.

#### Eastern California Shoshoni

These Shoshoni occupied the northern halves of Death Valley and Panamint Valley, all of Saline Valley, the southern end of Eureka Valley, the southern shore of Owens Lake, the Koso Mountain region,

the northern edge of the Mojave Desert, and the eastern slope of the Sierra Nevada Mountains (the Shoshoni Sierra Mountain use area being south of the Owens Valley Paiute use area).

Communal rabbit hunts and occasionally antelope hunts involved cooperating villages. When stored seeds were exhausted in March or April, and hunger became acute, families left the winter villages. They procured greens, which were the first food plants to be available, and hunted antelope and rabbits. In May some people went to Owens Lake for larvae.

Upper Panamint Valley held its own cooperative hunts, or joined Saline Valley or Death Valley people when convenient. Game, distinctly of secondary importance; requiring considerable time of hunters, occurred largely to the north and west. Deer were procured in the Inyo Mountains and Antelope in the lower ranges north of Saline Valley. Other foods procured were rats, mice, chuckwallas, rabbits, and birds. Occasionally, trips were made to Owens Lake for larvae or for duck hunting.

The "Sigai"; those who occupied the mountains separating Saline, Death, and Panamint Valleys procured pine nuts, various seeds, rabbits, and mountain sheep in their own territory. In the fall some families went to Owens Lake to hunt ducks.

For rabbit drives, families who happened to be in the vicinity of places with numerous rabbits cooperated. The main drives were at Rose Valley, Darwin Wash, the vicinity of Cold Spring, Little Lake, and Olancho. Mountain sheep might be hunted by individuals in the Koso Mountains or the Sierra Nevada and Deer in the Sierra Nevada. Fish were taken in Rose Valley and, with poison, in Little Lake. Larvae were procured in Owens Lake. Caterpillars could be had on the ground around Koso Springs, Little Lake, and elsewhere. Other animals eaten were bear, badger, chuckwalla, gopher, mice, rats, doves, eagles, hawks, crows, snakes, mountain lions, wildcats. Relative scarcity of animals made meat a minor food.

Little information was obtained for Panamint Valley. BD remembered crying for food in the spring during his childhood.

For the northern Death Valley people, there were virtually no deer nearer than Lida, an inconvenient distance away. Mountain sheep could be had on Tin Mountain, Dry Mountain near Sigai. Residents of Grapevine Springs, Surveyor's Well, and Mesquite Springs participated in rabbit drives. Beatty people often attended. Lesser game, especially rodents and chuckwallas, were of some importance. Birds were also taken when possible.

#### Beatty and the Belted Mountains

Shoshoni occupied southern Nevada from the Amegrosa Desert eastward

to the Pintwater Range and possibly beyond, including Desert Valley. Southern Paiute dwelt to the east, though it is probable that the population was a mixture of Paiute and Shoshoni, like that at Ash Meadows. Scarcity of game in this general region forced the population to subsist to an unusual degree upon vegetable foods.

Deer were virtually unknown within the distance that hunters could conveniently travel. Mountain sheep could be had in the Grapevine Mountains. Antelope were either lacking or unimportant in this area. Sometimes, however, Belted Range people went into the Kawich Mountain district, to the north, to participate in large communal drives. At Whiterock Springs, rabbit drives lasted about a month, with the men driving each day while the women gathered pine nuts. The meat was consumed at once. (Rabbit meat could not be stored for more than two weeks.)

#### Pahrump and Las Vegas - Southern Paiute

Hunting played a very minor role in Southern Paiute economy, as game was scarce. Ash Meadows people usually went to the Spring Mountains for deer. Mountain Sheep, which were formerly very numerous, were taken in the mountains between the Amargosa River and Pahrump Valley and in the Funeral Mountains. Communal rabbit drives were said not to have been practiced. There were few antelopes. Rabbits were taken with traps.

#### Moapa Valley Paiute

Fremont (1887, vol. 1, pp. 378-379) described the Paiute of the Muddy and Moapa Rivers as barefoot and nearly naked.

Southern Paiute, in contrast to the Western Ute, apparently lacked horses until very recently. Head (1867, pp. 174-176; 1868, pp. 148-149), and Fenton (1869, p. 203) said Southern Paiute in general had no horses. Horses which came into their possession were more often eaten than ridden. Fremont, observed in 1843 that Indians in the vicinity of the Mohave River and Agua Tomaso "made no other use of horses than to eat them" (1887, vol. 1, P. 373).

#### Ione Valley, Reese River, and Smith Creek Valley

A good many Paiute lived in Ione Valley where they had intermarried with Shoshoni. There was also some intermingling between Edwards Creek Paiute and Smith Creek Shoshoni. Otherwise these valleys were inhabited by Shoshoni.

Communal antelope and rabbit hunts were the main collective economic activities. Drives were held in March in Reese River Valley, usually just below Austin, or in neighboring valleys to the

west. Rabbits drives were held after pine-nut trips. Deer were unimportant in this region.

#### (Big) Smoky Valley and Monitor Valley

In November, after pine-nut harvests, the people assembled, usually in Cactus Flat, to drive rabbits for several days or even a month. Sometimes, Kawich Mountain people visited Whiterock Spring in the Belted Range to drive rabbits. Communal antelope drives directed by a shaman were held in the spring. No other mention is made of other animals or animal foods.

#### Little Smokey Valley and Vicinity

The Little Smoky Valley people were closely linked with the peoples of Hot Creek Valley, Willow Creek, and Fish Creek.

For rabbit drives, the villagers of the northern part of Little Smoky Valley joined Fish Springs, perhaps driving in the latter valley. The villages near Fish Creek, however, sometimes went to Diamond Valley, north of Eureka. All Little Smoky Valley people assembled near Snowball to build a corral and drive antelope and sometimes deer.

#### Pine Valley and Diamond Valley

Prior to the fall pine-nut trip people assembled in the southern end of Diamond Valley, south of the alkali flat, to drive antelope into a corral. Deer were sometimes hunted communally but this was done near Hamilton in northern Railroad Valley, when deer were migrating. Each fall, following pine-nut trips, people remained together to hunt rabbits west of the present town of Blackburn.

Spring often found people weakened by insufficient stored foods and many died. In one of the tributaries of Pine Creek, probably to the west or southwest of Mineral, they took small fish about 4 inches long. Similar fish could be had at Tupagadu. They went north of Mineral to gather roots and seeds, or to kill woodchucks, chipmunks, and other smaller mammals.

#### Railroad Valley

Duckwater people drove rabbits about 15 miles south of Duckwater in the valley flat near Biadoya. Villages participating with Duckwater were Curran Creek, Warm Springs, Hamilton, and even Nyala and Hot Creek at times. Antelope hunts were held in the spring in a low pass in the northern end of Railroad Valley between Akamba and Mount Hamilton.

### Steptoe Valley

Rabbit drives were held about November, after the pine-nut harvest, and continued during December and January. Antelope were driven communally. Ely people went to Spring Valley near Cleveland for drives. But there were also independent drives under different shamans in southern Steptoe Valley, in northern Steptoe Valley and Cherry Creek, at Indian Spring in southern Spring Valley, and in White River Valley. Deer were driven communally into a corral.

### Spring, Snake, and Antelope Valleys

The populations of these valleys was Shoshoni. But in Lake Valley and in the extreme southern portions of Spring and Snake Valleys it was mixed with Southern Paiute. Gosiute, who were indistinguishable, culturally and linguistically, from Shoshoni lived in the region bordering the Great Salt Lake Desert.

Antelope hunts were communal, under shamans who sang 5 nights. Forty or fifty men and women helped corral the animals. Deer were not shamanized. Collective hunts, in which deer were driven over cliffs, were infrequent. Mountain sheep were hunted by individual men. Buffalo disappeared when JR's grandfather was a young man. Hunting methods used for them were not known. Rabbit hunts were held near Garrison in Snake Valley. Antelope drives were held against the foothills between Baker and Garrison.

### Cave Valley

Pine-nuts were gathered from the Ely Mountains, around Mount Grafton and as far south as Wilson Creek, northwest of Pioche, in Southern Paiute territory. JR thought Cave Valley Shoshoni and Southern Paiute permitted each other access to pine-nut lands. Animals were not mentioned for this area.

### Deep Creek and Skull Valley Gosiute

Between the Deep Creek area and the Sevier Desert to the south and between the House Mountains and the Utah-Nevada boundary lie vast deserts with little water. They probably had a sparse population living at isolated springs. M and JPi thought they were Gosiute who had mixed somewhat with the Ute of the Sevier Lake and the Sevier River regions. The greater number of Gosiute villages named by M lay in Skull Valley and Sink Valley. The people living around Trout Creek on the eastern slope of the Deep Creek Mountains were also called Gosiute.

All Gosiute probably held shamanistic antelope drives. Howard Egan

told of his participation in a hunt that took place in Antelope Valley, which is north and east of Deep Creek:

"For a few days before I came the squaws and bucks were busy repairing and extending the flanking arms of the old corral, or trap pen, which was located near the north end of Antelope Valley and about 20 miles northwest of Deep Creek. It was pretty cold weather, but no snow on the ground. The Indians thought it a good time and expected a good catch.

"After they had all come in from their work a great deal of talking and planning was on and each knew just what part and place he or she was to take. By daylight all were ready for the start, and in fact, a number of the young men had left early in the evening before to go to the extreme south end of the ground to be covered and about 20 miles from the pen. They were to spread apart across the valley, travel in open order back to the north, being careful that not one of the antelope jumped would run, except in a northerly direction...

"An antelope, when started up, will always run directly for one of these [knolls], that lay opposite from where he gets his scare from, and they run from hill to hill. They see no one ahead of them but the party behind being constantly increased, and if they undertake to pass around the drivers a buck or squaw is sure to raise to his feet, and that sends them off to the center again.

"Thus it goes till they come to the line between the outer ends of the arms, which, there are about 4 miles apart, but gradually closing in as they get nearer the pen. The arms or leads are started at the extreme ends by simply prying or pulling up a large sagebrush and standing it roots up on the top of another brush, thus making a tall, black object visible for miles. The standing of these brush were at first some 10 to 20 feet apart, but were placed more and more near together the nearer towards the pen, and when the two lines came to about 100 yards apart, they were built so the butts of the brush were as close as the tops would allow them to be joined and by this time both wings had swung to the east side of the valley, where there were many ravines to cross and plenty of cedar and pine to use for fencing.

"There were many turns to the lane thus formed, but [it] was getting narrower and stronger till finally, around a sharp turn through a large, thick bunch of cedars, the game were in the corral, which was about 200 feet in diameter and built strong enough and high enough to withstand a herd of buffalo. The pine and cedar trees had not been removed from the inside of the pen and not many from the runway, for a mile back...

"The drivers... were all on a fast run, yelling like

a pack of coyotes. The drive came to an end with a rush and everyone working desperately closing up the entrance...

Then began the killing of as many as were wanted that day, the killing was done with arrow and seldom missed piercing the heart. The catch was about 25, mostly all bucks or does... There were five or six bucks killed that day... to give the squaws time to cut up in thin strips the flesh and dry it on a rack built over a small fire, thus curing it so it would keep for a long time if kept dry... "Three or four young men [had been left] to guard the place." By the next morning the antelope had run themselves down and were huddled in the center of the enclosure... The Indians picked out five or six of the largest, which were killed...

"The Indians told me that the last drive, before this one at this place was nearly 12 years ago and the old men never expected to see another at this place, for it would take many years for the animals to increase in sufficient numbers to make it pay to drive. These drives are mostly in the desert valley, where the poor horseless natives live."

In addition to having drives in Antelope Valley, drives were also conducted west of the Cedar Mountains or just south of Delle. Rabbit drives were held in the fall. In Deep Creek Valley drives were held along the flats at any time during the winter.

The importance of rodents was considerable in this region. Haward Egan described them being taken with deadfall traps. He met an Indian whose "plan was to go up one side of the canyon, setting the traps wherever he saw the sign of rats, and the same down the other side. The next day, taking the same route, gathering the catch and resetting the traps. The rats... were 6 to 8 inches long..." The extent of operations is indicated by the fact that though this man had set most of his traps, he had over 100 triggers he had not used.

Egan also saw 8 or 10 women at Creek Hollow diverting water by means of little ditches into gopher holes. In part of a day some of them acquired up to half a bushel, with several days of work ahead. Beckwith remarked (1855, p. 22) that a small "ground-rat or gopher and a black beetle like cricket" furnished a large portion of Gosiute food.

### Ruby Valley and Vicinity

Compared with the territory of eastern Nevada, Ruby Valley is exceptionally fertile. Long, Butte, Independence, and Gosiute Valleys to the east are so barren and arid that they supported only

a sparse and scattered population which lived in small encampments at the few springs and streams.

Ruby Valley people hunted antelope communally in or near either Butte or Long Valley. Corrals were built in the northern end of each valley. There was also one at White House Spring, two on the western side of Spruce Mountain, and one on the western side of the Cedar Mountains. Ruby Valley people held drives for white rabbits in the Ruby Mountains or for ordinary jack rabbits near Medicine Spring. Mention is made of communal deer hunts.

Beckwith (1855a, pp. 26-27) who observed some of these people in 1854 west of Gosiute Lake, probably near Butte Creek, observed that these "Diggers" "live a family or two in a mountain. The camp he saw was but a fire built beside a cedar tree. The family lacked shelter and blankets, had only a couple of deer skins, a few ground-rats, grass seed, and a variety of artemisia seed. RVJ said that a few horses were acquired during his childhood, about 1960, but these were usually eaten.

In the accounts written of Tumok [Temoke] it is mentioned that persons from South Fork and elsewhere sometimes came to Ruby for mud hens. When Tumok first met white men he was trapping sage hens in Ruby Valley.

#### Humboldt River and Vicinity

Ogden, traveling somewhere on the upper Humboldt River in November 1827, described the Indians (vol. 10, pp. 384-385) as numerous, wretched, and wild, "with scarcely any covering, the greater part without bow and arrows and without any defense." Walker (Irving, 1898, vol. 2, p. 94) said they were shy, forlorn, and scattered in 1825. Leonard, traveling down the Humboldt River in 1834, said (p. 157) that "the natives ...still continued to be of the most poor and dejected kind - being entirely naked and very filthy." Near the present town of Wells, Bryant, in August 1846, met six Shoshoni, of whom he said (pp. 194-195), "The bodies of two or three of them were partially covered with the skins of hares sewn together. The others were entirely naked." One had a "miserable gun," two or three had bows and arrows, and several had hare-skin pouches. Near the Humboldt River he met 5 naked Indians (p. 198) and probably at or near the present town of Elko they saw 200 or 300 Indians in a group (p. 205). Between Goose Creek, Utah, and the headwaters of the Humboldt River, Delano, in July 1849, saw Indians who were entirely naked except for breechcloths and who carried bows and iron-tipped arrows (p.159). Farther down the Humboldt River they saw the "palace of a 'merry mountain Digger.'" It was simply a

cleft in the rocks - a kind of cave, strewn with wild grass, and might have served equally well for the habitation of a Digger king or a grizzly bear" (pp. 170-171). Humfreville (pp. 289-293) stated that they stole horses and mules to eat but not to ride, had no homes, often went entirely naked, ate what they could get, including crickets, frogs, toads, snakes, insects, grasshoppers, and clay, had no war, sometimes sold their children to get food, had small, dirty houses, were too lazy to fight, forage, or stir, and only sometimes lived in families which broke up readily. Simpson in 1859 (p.37) wrote that the Humboldt River Indians "were of Sho-sho-nee origin, but had no chief. They lives scatteredly, and, like the Go-shoot, are of a low type and live and dress in the same way."

In a valley a little south of Elko, Beckwith met about 50 Indian men. They had been shooting gophers with blunt arrows, digging them by hand, or catching them in figure-

4 traps, each man getting 40 to 50. These men had hidden their "treasures", one bringing out a piece of an old buckskin, a couple of feet square, smoked, greasy, and torn; another a half dozen rabbit skins in an equally filthy condition, sewed together, which he would swing over his shoulders by a string--his only blanket or clothing; while a third brought out a blue string, which he girded about him and walked away in full dress--one of the lords of the soil."

Hunting was carried on along the Humboldt River but game was none too plentiful. A man was lucky to kill enough large game to make a complete outfit of skin clothing. Early accounts indicate that such small game as ground hogs, gophers, and rats were perhaps economically more important than such large game as deer, antelope, and sheep. There was no communal rabbit hunts in which nets were used. Buffalo, though occurring in Utah until 1932, were unknown here.

There was one antelope shaman in the region of Elko. There was a corral on the hills north of Elko and another on the mountain south of Elko, one on the mountain west of Jiggs in Huntington Valley, and probably another near Halleck. Small groups of people without any director sometimes hunted mud hens in Ruby Valley. They drove the birds out of the water and killed them with clubs as they ran through the marsh grasses. Mountain sheep were hunted on the Ruby Mountains, Swails Mountain, "North Fork Mountain", or the Jarbidge Mountains.

There were many fish in the Humboldt River and some in South Fork, Mary's River, and Lamoille Creek. Individuals took fish in summer and winter with nets and hooks. Communal fishing involved stone dams or willow weirs equipped with baskets. A stone dam was

photographed in the Humboldt River 13 miles west of Elko. There was also a dam on Suzie Creek not far from its junction with the Humboldt River. Another was on South Fork about 12 miles from the Humboldt River.

When stored seeds were insufficient to last the winter people might go to the low ridges north of the Humboldt River near the mouth of North Fork Creek, to gather cactus. Thousand Springs Valley people went to Fort Hall "where there is more game, and where they intend to winter". For sand bunch grass they went sometimes to Ruby Valley, a there was little near Elko.

### Battle Mountain and Vicinity

Shoshoni occupied this region to and including Iron Point. People from the northern Reese River Valley often wintered here. As pine-nuts did not occur in sufficient quantities locally, people along this section of the river sometimes went 80 miles south toward Austin to gather them. Sometimes they went an equal distance to the headwaters of the Owyhee River and other tributaries of the Snake River to get salmon. They usually consumed the salmon before reaching home, however. Rabbit drives were held in the fall and winter when furs were good. Large crowds of people, formerly on foot but more recently on horseback, drove antelope into a corral. There were also minor cooperative nonshamanistic deer hunts.

### Snake River

The Shoshoni of western Idaho differed from those at Fort Hall. Some were impoverished and pursued a restricted annual subsistence routine on foot, while other, possessing a few horses, ranged over a wider territory which afforded more varied resources.

Hunting of large animals was rarely undertaken and involved no communal effort. Neither mountain sheep nor elk could be had within convenient distance. Deer were generally procured about 20 miles south of the Snake River where hunters ambushed them on game trails. There were no Communal drives or corrals.

Having generally wintered near the Snake River, living on dried salmon, insects, and roots, and frequently starving, spring found most families awaiting the first run of salmon. The first "salmon" came about March or April. The best fishing was near Hagerman, that is, at Upper and Lower Salmon Falls, at the bottom of which the fish were taken in nets. They were also caught with hooks, and especially with dams and weirs. The second run of salmon came in May or June.

In July most people who had fished in the Snake River usually traveled to Camas Prairie to gather yamp, camas, and other roots.

While at Camas Prairie, gray ground squirrels afforded the main meat. People sometimes went up small streams, e. g., the Owyhee River, for the purpose of procuring roots and berries as well as of taking these salmon. Also, mugadu, described as a sucker, a bony fish with wide mouth and yellow stomach, were sometimes taken in the Owyhee River.

It was probably infrequent that Snake River Shoshoni went south for pine-nuts, because the trip was too long to make on foot. Pine-nuts could be had no nearer than Grouse Creek, Utah, or Beowawe, Nevada. CT thought that people perhaps went for pine-nuts if salmon failed, but does not remember any famine or any cannibalism which was common elsewhere.

On the Snake River, probably in the section between Shoshone Falls and Salmon Falls, the Astoria party saw a number of dwellings which, in October 1811, "were very comfortable; each had its pile of wormwood at the door for fuel, and within was abundance of salmon, some fresh, but the greater part cured... About their dwellings were immense quantities of the heads and skins of salmon, the best part of which had been cured, and hidden in the ground." Along this part of the river, the shores were "lined with dead salmon." "There were signs of buffalo having been there, but a long time before." Along the northern side of the Snake River in the vicinity of Salmon Falls they saw evidence of a great many horses, though the Indians "were never willing to part with their horses, having none to spare." Indians on the opposite side of the river were more impoverished (Irving, 1897, vol. 2, pp. 38-40). On August 25 they saw about 100 lodges of Shoshoni fishing at Salmon Falls. On the northern side of the river below Salmon Falls they "passed several camps of Shoshonies, from some of whom they procured salmon, but in general they were too wretchedly poor to furnish anything" (op. cit., pp. 169-171).

In 1843 Farnham (p. 312), about 20 miles above Shoshoni Falls on the western bank of the river, found a family of "Root Digger Indians, the man half clad, children naked, all filthy."

In 1842 Fremont mentioned no camps above Salmon Falls, but saw several at the falls and below it. "We now very frequently saw Indians, who were strung along the river at every little rapid where fish are to be caught." He described the Shoshoni at Salmon Falls as "poor" and "but slightly provided with winter clothing; there is but little game to furnish skins for the purpose; and of a little animal which seemed to be most numerous, it required twenty skins to make a covering to his knees... [the Indians] grow fat and become poor with the salmon..." and lived in "semicircular huts made of

willow, thatched over with straw and open to the sunny south." These were unusually gay savages, fond of loud laughter" (1887, vol. 1, pp. 249-252).

In August 1845 Palmer saw 18 or 20 Indian huts at Salmon Falls (p. 93).

Wyeth (Schoolcraft, 1851, p. 216) says "these Indians nearly starve to death annually, and in winter and spring are emaciated to the last degree; the trappers used to think they all eventually died from starvation as they became old and feeble. In salmon time they get fat."

### Boise River and Vicinity

It appeared that the Shoshoni extended westward about to the Snake River which forms the boundary between Idaho and Oregon. They also occupied the Boise River Valley and probably to some extent the valleys of the Payette and Weiser Rivers.

The general name for people of this area was Yabanduka, Groundhog Eaters. WH said families sometimes went south into Nevada for pine-nuts. The area was also frequented by Fort Hall and Lemhi Shoshoni and by Nez Perces.

Hunt, in 1812, observed that people near the Boise River were better clad and had more horses than Indians up the Snake River, though somewhere on the Snake River below the Boise River he met starving Shoshoni (Irving, 1897, vol. 2, pp. 42, 45). He said that in the vicinity of the mouth of the Payette was a famed Snake Salmon fishery (p. 160).

In 1839 Farnham saw a camp of "Snake" fishermen on the Boisais (Boise) River, who were "laying in their winter supply of salmon. Many horses were feeding on the plain" (1843, p. 316).

In the vicinity of the Boise and Snake Rivers, Townsend saw several groups of about 20 "Shoshone" fishing (pp. 253-254).

Palmer saw 30 to 40 Indians on the southern side of Snake River, a little above the Boise River. Some were mounted and some had guns (pp. 244-245).

Fremont called the Boise River Indians "Shoshonee or Snake" in 1842. He observed that there were several encampments strung along the river. The Indians visited him on horseback, bringing dried and fresh fish to trade. "While the summer weather and salmon lasted, they lived contentedly and happily, scattered along the different streams where the fish were to be found; and as soon as the winter snows began to fall, little smokes could be seen rising among the mountains, where they would be found in miserable groups, starving out the winter; and sometimes, according to the general belief, reduced to

the horror of cannibalism - the strong, of course, preying on the weak. Certain it is they are driven to any extremity for food, and eat every insect, and every creeping thing, however loathsome and repulsive. Snails, lizards, ants - all are devoured with the readiness and greediness of mere animals" (1887, vol. 1, pp. 255-257).

### Grouse Creek

These people occupied a comparatively isolated territory centering on Grouse Creek northwest of Great Salt Lake.

Communal antelope hunts were held near Terrace and in Grouse Creek Valley, near Lucin. Rabbit drives were held after snow had fallen in Grouse Creek Valley, near Lucin, and at a place north of Matlin. The few "trout" in Grouse Creek were a minor factor in the economy. Kumbiidagwani, a small, brown ground squirrel was hunted communally.

### Promontory Point

Communal antelope hunts, with and without carrels, were held along the Bear River flats. Communal rabbit drives were relatively unimportant. Promontory Point is near the northern limit of the black-tail jack rabbit. Communal duck drives were held in the marshes around Bear River Bay. Deer were sometimes driven over cliffs. Fish, taken in the Bear River were suckers and trout.

In August 1842 Fremont came upon "several families of Root Diggers, who were catching fish... They had...matted hair, and were almost entirely naked; looking very poor and miserable..."

### Northern Shoshoni Bands - Lemhi and Central Idaho

Shoshoni and possibly some Bannock had established comparatively large villages on the Lemhi River and several small villages in isolated places in the mountains. Some were even located east of the Continental divide - in the Bitter Root Mountains - in western Montana.

Lander said of these people (1860, p. 137): "Subsistence; salmon and trout, elk, deer, and antelope; range, on Salmon River and the mountains north of it; horses, a small number. A small band of the Sheep-eaters are very fierce and wild, rarely visiting whites."

The Lemhi had frequent contact with their various neighbors. They were often visited by the Nez Perce, Flathead, and Southern Idaho Shoshoni, who found the Lemhi Valley a refuge from the raiding Blackfeet. Sometimes, they joined these tribes on trips for buffalo, or met them at Camas Prairie in western Idaho.

Subsistence was principally on seeds, roots, mountain sheep, deer, and salmon. Antelope were scarce; there were no buffalo. The fertile and lower Lemhi Valley had some antelope. The Lemhi Shoshoni did have horses with which to make expeditions to the south and east for buffalo.

Gass (p. 123) described the Lemhi as the "poorest and most miserable nation I ever beheld; having scarcely anything to subsist on except berries and a few fish."

There were few deer. Antelope were surrounded on horseback and shot with bow and arrows. Rabbits were too scarce for communal hunts. Young water fowl were sometimes taken in drives. Fish were taken by means of hooks, harpoons, baskets, and dams by individual fishermen.

During the summer some families went east to hunt buffalo while others went west to Camas Prairie to trade buffalo hides to the Nez Perce for horses. As buffalo were extinct in Idaho by 1840, the hunting families crossed the Bitter Root Mountains to Crow territory in the vicinity of Yellowstone, gathering seeds, roots, and berries on the way. For protection against marauding parties of Blackfeet they often joined forces with Fort Hall Shoshoni and Bannock, Wyoming Shoshoni, Flatheads, and sometimes even Crows. All summer they followed the herds. In October they returned to the Lemhi Valley with their hides and dried meat.

Trips to Camas Prairie were made by small, independent groups. These families generally remained in the same place until October, eating sage hens, grouse, ground hogs, woodchucks, trout from the small streams flowing into the Malad River, and deer and antelope from the mountains. Some Shoshoni from Fort Hall and Nez Perce as well as from the Snake River itself, also spent the summer in this prairie. Families returned to the Lemhi River in the Fall and remained there all winter. Famine was not uncommon.

#### Fort Hall Bannock and Shoshoni

Shoshoni and the Northern Paiute speaking Bannock, occupied the Fort Hall region. The Shoshoni at Fort Hall are distinguished from those in western Idaho by having had some horses and a comparatively high degree of political solidarity at an earlier period. The Fort Hall Bannock actually were located in eastern Oregon in early historical times.

Ross ( 1855, vol. 1, pp. 249-252), who visited the area about 1820, apparently lumped the scattered Shoshoni families of southern Oregon as "Ban-at-tees," (the Shoshoni name for the Bannock) or "Mountain Snake," saying that they lived in small groups in caves and rocks, dressed in skins of rabbits, wolves, and other animals in winter, went naked in summer, and had only bows and arrows.

This does not at all describe the Fort Hall Bannock.

The environment of the Fort Hall Shoshoni and Bannock is not unlike that to the west and south. It consists largely of arid, sage covered desert plains which were largely destitute of game. Wyeth (Schoolcraft, 1851, p.206), who lived at Fort Hall from 1834 to 1936, said it had very few deer and elk except in the mountains, only a small number of mountain sheep, antelope, and bear, and only two kinds of rabbits. The main asset was salmon, which ran up the Snake River only to Shoshone Falls and therefore required a long trip downstream. Buffalo occurred in the eastern part of the area, and there had been many near Fort Hall in 1834 (Wyeth in Schoolcraft, 1851, pl 217). In fact, Ogden (vol. 11, p. 207) saw many buffalo skulls though no living animals at Silver River near Malheur Lake, Oregon, and Informants claimed that several generations ago buffalo had occurred in small numbers even in northeastern Nevada. But buffalo were extinct in northern Utah by 1832 and in Idaho by about 1840 (Fremont, 1887, vol. 2, p. 218).

Thompson recounts a fight between Blackfeet and Shoshoni in 1730, when the latter (probably Wyoming groups) had horses but the former had none (pp. 328-344), but Wissler (1914) believes that both Blackfeet and Shoshoni had horses in about 1750. The horses revolutionized Shoshoni economy by making it possible to use new methods of hunting which yielded greater wealth in foods and hides and enabled people to live in large and comparatively permanent groups. Families which previously had to live near their cached foods could now transport the foods to a central location. After 1840, and perhaps to some extent earlier, Shoshoni and Bannock, alone or in company with Nez Perce and sometimes with Flathead, Lemhi, and Wyoming Shoshoni made long excursions across the Rocky Mountains to the Buffalo country of the high plains. Lander (1860, pp. 121-122) says "Pannacks" and even "Salt Lake diggers" joined in trips to the Headwaters of the Missouri and Yellowstone Rivers, the latter making trips of 1,300 miles. Those who had horses naturally fared best.

In 1811, Hunt's party saw Shoshoni, who were probably from Idaho hunting buffalo somewhere near the headwaters of the Green River (Irving, 1897, vol. 1, pp. 385-387). Fear of Blackfeet as well as the greater efficiency of communal hunting compelled the main body of Fort Hall Shoshoni and Bannock to travel as a unit. On their way east they usually procured chokecherries and various seeds, roots, and berries in the mountains. In the vicinity of Yellowstone they sometimes stopped briefly to gather nuts of the "white pine," wongoduba, which they either ground and carried to the plains in buckskin sacks or cached to provide food for their return trip.

Buffalo hunting was accomplished merely by running down the animals with fleet horses. A few families sometimes wintered on the plains, especially if they had few or no horses. But most people

returned to Fort Hall late in the fall, transporting the dried buffalo meat and hides on their horses. Meanwhile some families remained during the summer in the vicinity of Fort Hall or went to the region of Bear Lake for roots, berries, mountain Sheep, and other game. In the fall some families went south to the Grouse Creek region for pinion nuts.

### Bannock Creek Shoshoni

Shoshoni occupying the area from Bannock Creek on the Fort Hall Reservation in Idaho to the northern shore of Great Salt Lake in the vicinity of Keaton came to form a single band under Chief Pocatello.

OD called these people Kamuduca (jack-rabbit eaters). The Kamuduka did not remain together as a single band during the summer, but scattered in small groups of families to gather foods, some going to Bear Lake, some to the Malad River in Utah, and some down the Snake River beyond Twin Falls, perhaps to Camas Prairie.

Many of these people were killed in the Bear River massacre of 1863 and only 50 descendants are said to remain today.

### Cache Valley

This fertile Valley was long the center of trapping operations by the white man and, as early as 1826, was the site of an annual rendezvous of Indians and trappers.

Doty (1864, pl 175) states that all but seven of Bear Hunter's band were killed in the Battle of Bear River. Gottfredson (1919, pp. 111-115) says that Bear Hunter, Sagwitch, Lehi, Pocatello, and Sanpitch were involved in this battle.

The Cache Valley Shoshoni ranged along the Bear River under the leadership of Bear Hunter and Lehi, according to OD. Having horses, they sometimes traveled to Bear Valley, and no doubt took Buffalo and mountain Sheep. Wyeth says mountain sheep were very numerous in Cache Valley in 1836. (Schoolcraft, 1851, pp. 220-221). They were sometimes on Bear River, near Corinne, for fish.

In August 1842 Fremont (1887, vol. 1, p. 206) saw a large village of horse Shoshoni near the head of Bear River. They had come to hunt antelope and to gather service Berries and "kooyah," bitterroot or tobacco root (*Valeriana edulis*). These were not necessarily from Cache Valley, however, as Idaho Shoshoni also ranged in this territory. In Cache Valley he visited a village of poor and hungry Shoshoni (p. 217), and observed that they ate principally "yampah" (*Anethum graveolens*), tobacco root, and a

large root of a species of thistle (*Circium virginianum*)" (p. 221).

De Smet's account of the "Sampeetches" (1843, pp. 165-167) may be intended for the Cache Valley Shoshoni. Hew says: "The Sampeetches are the next neighbors of the Snakes. There is not, perhaps in the whole world, a people in a deeper state of wretchedness and corruption; the French commonly designate them 'the people deserving of pity.' ... Two, three, or at most four of them may be seen in company, roving over their sterile plains in quest of ants and grasshoppers, on which they feed. When they find some insipid root, or a few nauseous seeds. they make...a delicious repast. They are so timid, that it is difficult to get near them; the appearance of a stranger alarms them; and conventional signs quickly spread the news amongst them. Every one, thereupon hides himself in a hole; and in an instant this miserable people disappear and vanish like a shadow. Sometimes, however, they venture out of their hiding places, and offer their newly born infants to the whites in exchange for some trifling articles."

### Salt Lake Valley

Escalante observed in 1776 that the people near Great Salt Lake, which he did not visit, were called Puaguampes or "sorcerers" (the Shoshoni word for shaman is puhagunt) and that they spoke Comance (which is identical with Shoshoni). They were, he said, eating herbs and living in houses of dry grass and earth. They were not enemies of the Ute and Utah Lake people, though there had been some restraint between the two tribes since the former had killed a Ute man.

### Western Ute Bands

In early times the Ute were distinguished from both Southern Paiute and Gosiute Shoshoni by their possession of horses. Though Escalate, 1776, did not mention horses in western Utah, it is probable that there were at least a few. Ute occupying the great central mountain mass in Utah had a country less suitable for horses, and for some time remained on a subsistence level like that of Western Shoshoni. Thus, Tourtellotte (1870. p. 142) said the "Fish Utes" around Red Lake lived by hunting and fishing, and Irish (1865) that the San Pitches are "exceedingly poor, and live principally upon fish, berries, and roots. De Smet's remarks about the Sanpitches quoted above (p.219) may have been intended for these rather than Cache Valley Shoshoni.

Escalate leaves the impression that the Utah Lake people possessed some organization. He said that they dressed in "buckskin jackets, leggings, moccasins, and rabbit skin blankets," lived in "cane hunts" and ate mostly fish (being therefore called "Fish Eaters"), supplemented by seeds, rabbits, and fowl. There were buffalo to

the northwest, but the Ute feared to hunt them on account of the Comanche. At 41 degrees latitude, perhaps in the Uintah Basin region, "Comanche" on horses had pursued Ute Buffalo hunters and Ute had left their camps in the fertile valley on the east side of the Wasatch for fear of Comanche (Harris, pp. 167, 172). Utah Lake was not again visited until trappers entered the region about 1820. By the forties, these Indians were well mounted (Fremont, 1887, vol. 1, p. 387).

#### Pahvant or Sevier Desert Ute

Escalante stated that four days travel south of Utah Lake he met a camp of 20 Indians, who spoke the same language as at Utah Lake and who wore nose pins of bone and rabbit-skin blankets. Gottfredson (1919, p. 32) said that in 1849 the Indians claiming the country around Manti, on San Pitch Creek, wintered in the Sevier River Valley where there was less snow and where they could take deer, rabbits, ducks, and geese and trap beaver and mink. In the spring, they camped west of Manti.

#### Yampah and Elk Mountain Utes

Located somewhere south of the Uintah Basin. This country was described to Ashley-Smith (Dale, 1918, p. 151) as a place with little game, where people ate roots, fishes, and horses. But Tourtellotte (1869, pp. 230-231) said the "Yam Pah-Utes" were mounted and lived by hunting. Vaile (1862, p. 236) said Elk Mountain Ute were well mounted. Starting in April, they traveled to the Grand River, then to the Bear River, Laramie Plains, and the Snake country, or to the White River and down the Green River to Snake country. After hunting buffalo and fishing they returned home in September.

Further quotations from early observers found on pages 9 and 10 of Julian Steward's book provide additional insight into the conditions that existed at that time.

Fremont (1887, vol. 1, pp. 391-392) said that the Great Basin is "peopled... but miserably and sparsely. From all that I heard and saw, I should say that humanity here appeared in its lowest form and in its most elementary state. Dispersed in single families; without firearms; eating seeds and insects; digging roots (and hence their name)--such is the condition of the great part. Other are of a higher degree, and live in communities upon some lake or river that supplies fish, and from which they repulse the miserable *Digger*. The rabbit is the largest animal known in this desert; its flesh affords a little meat; and their baglike covering

is made of its skins. The wild sage is their only wood, and... serves for fuel, for building material, for shelter to the rabbit, and for some sort of covering for the feet and legs in cold weather," and (p.438) "In the Great Basin, where nearly naked he traveled on foot and lived in the sagebrush, I found him in the most elementary form; the men living alone, the women living alone, but all after food. Sometimes one man cooking by his solitary fire in the sagebrush which was his home, his bow and arrows and bunch of squirrels by his side; sometimes on the shore of a lake or river where food was more abundant a little band of men might be found occupied in fishing; miles away a few women would be met gathering seeds and insects, or huddled up in a shelter of sagebrush to keep off the snow."

Leonard, 1831-36 (1904, p. 127), said the "Diggers or Root eaters" Shoshoni or Snake "keep in the most retired recesses of the mountains and streams, subsisting on the most unwholesome food, and living the most like animals of any race of beings."

Parker, 1835 (1842 p. 83): "These are probably the most destitute of the necessities of life of any Indians west of the mountains ... They are often called Snakes and Root Diggers, from being driven to these resorts to sustain life; and parts of the year they suffer greatly from hunger and cold. They are more squalid than any Indians I have seen ..."

Farnham (1843, pp. 248-249), speaking of "Paiute" and "Land Pitches" whom he erroneously placed on the Sevier River, said, "They wear no clothing of any description-- build no shelters. They eat roots, lizards, and snails... They provide nothing for future wants. And when the lizard and snail and wild roots are buried in the snows of winter, they are said to retire to the vicinity of timber, dig holes in the form of ovens in the steep sides of the sand hills, and having heated them to a certain degree, deposit themselves in them, and sleep and fast till the weather permits them to go abroad again for food. Persons who have visited their haunts after a severe winter have found the ground around these family ovens strewn with the unburied bodies of the dead, and other crawling among them, who have various degrees of strength, from bare sufficiency to grasp in death, to those that crawl upon their hands and feet, eating grass like cattle. It is said that they have no weapons of defense except the club, and that in the use of that they are very unskilled. These poor creatures are hunted in the spring of the year, when weak and helpless... and when taken, are fattened, carried to Santa Fe and sold as slaves..." The last reference is to slave trade, carried on by the Ute of western Utah.

Ogden, the first visitor to write of the northern

portion of this country, traveled the Humboldt River in 1827-28 and wrote that the Indians were numerous, wretched, and wild (vol. 11, p. 383). Near Malheur Lake, Oregon, he met Indians (probably Northern Paiute) who were leading a wandering life, and were wild and starving (vol. 11, p. 208), and on the plains somewhere between the Raft River and Owyhee River he met Indians moving on foot, loaded with baggage (vol. 11, p. 362).

Campbell (1866, p. 120) says of Nevada Shoshoni and other desert tribes that "suffering and scarcity at times forms a part of their history from time immemorial."

Domenech said, "The Indians who inhabit [the Great Basin] live solitarily, either in families or in little societies. According to the season, they emigrate from one place to another to seek miserable roots, which form their only nourishment; even animals are seldom to be found there" (1860, vol. 1, p. 242). The "Digger" Shoshoni are "compelled to spend two-thirds of the year among the mountains, with no other resource than a little fish and roots. When both these provisions fail, or become scarce, it is impossible to picture the wretched state of these pariahs of the wilderness... The Snakes are less unhappy than the Shoshonees, properly so called. They are rather cleanly in their persons and never eat horse or dog flesh. They have good horses, and are admirable riders and skillful hunters... The Shoshonees who possess horses sometimes join the Flatheads in making incursions into their ancient territory..." i.e., east of the Rocky Mountains, for buffalo (vol. 2, p. 61). "The Indians of Utah are the most miserable, if not the most degraded, beings of all the vast American wilderness. They belong to the Shoshonees, properly so called, to the Snakes and Utahs, or Pan-Utahs, called payuches by the Spaniards. They live almost always on roots, seeds of indigenous plants, lizards, and field crickets; at certain seasons they have fish in abundance; this period of plenty once past, they remain in dreadful destitution" (vol. 2, p. 64).

**Additional information** not included in Julian Stewards book, which illustrates the poverty that existed for the native people throughout much of the west during the 1800s, can be found in the journals of Lewis and Clark.

In 1805, after crossing the Lemhi pass, it was the plan of Mariwether Lewis to make contact with the Shoshone people on the west side of the continental divide; where he thought, they could trade for food and horses and lay over a few days before crossing the Lolo Pass. However, according to Lewis; "the Cheif informed us that they had nothing but berries to eat and gave us some cakes of

serviceberries and chokecherries which had been dried in the sun; of these I made a hearty meal..."

The following day, Meriwether Lewis; "sent Drewyer and Shields before this morning in order to kill some meat as neither the Indians nor ourselves had any thing to eat... after the hunters had been gone about an hour we set out. we had just passed through the narrows when we saw one of the spies [one of the Indians who was following and watching the white hunters] coming up... he had come to inform us that one of the whitemen had killed a deer. "in an instant they all gave their horses the whip... as I was without [s]tirrups and an Indian behind me the jostling was disagreeable I therefore reigned up my horse and forbid the indian to whip him who had given him the lash every jum[p] for a mile fearing he should loose a part of the feast. the fellow was so uneasy that he left me the horse dismounted and ran on foot at full speed I am confident a mile."

"...when they arrived where the deer was which was in view of me they dismounted and ran in tumbling over each other like a parcel of famished dogs each seizing and tearing away a part of the intestens which had been previously thrown out by Drewyer who killed it; the seen was such when I arrived that had I not have had a pretty keen appetite myself I am confident I should not have taisted any part of the venison shortly. each one had a peice of some discription and all eating most ravenously. some were eating the kidnies the melt [spleen] and liver and the blood runing from the corners of their mouths, others were in a similar situation with the paunch and guts but the exuding snbstance in this case from their lips was of a different discription. one of the last who att[r]acted my attention on particularly had been fortunate in his allotment or reather active in the devision, he had provided himself with about nine feet of the small guts one end of which he was chewing on while with his hands he was squeezing the contents out at the other. I really did not untill now think that human nature ever presented itself in a shape so nearly allyed to the brute creation".

Map of the distribution of the horse and bison found on page 37 of Julian Stewards book.

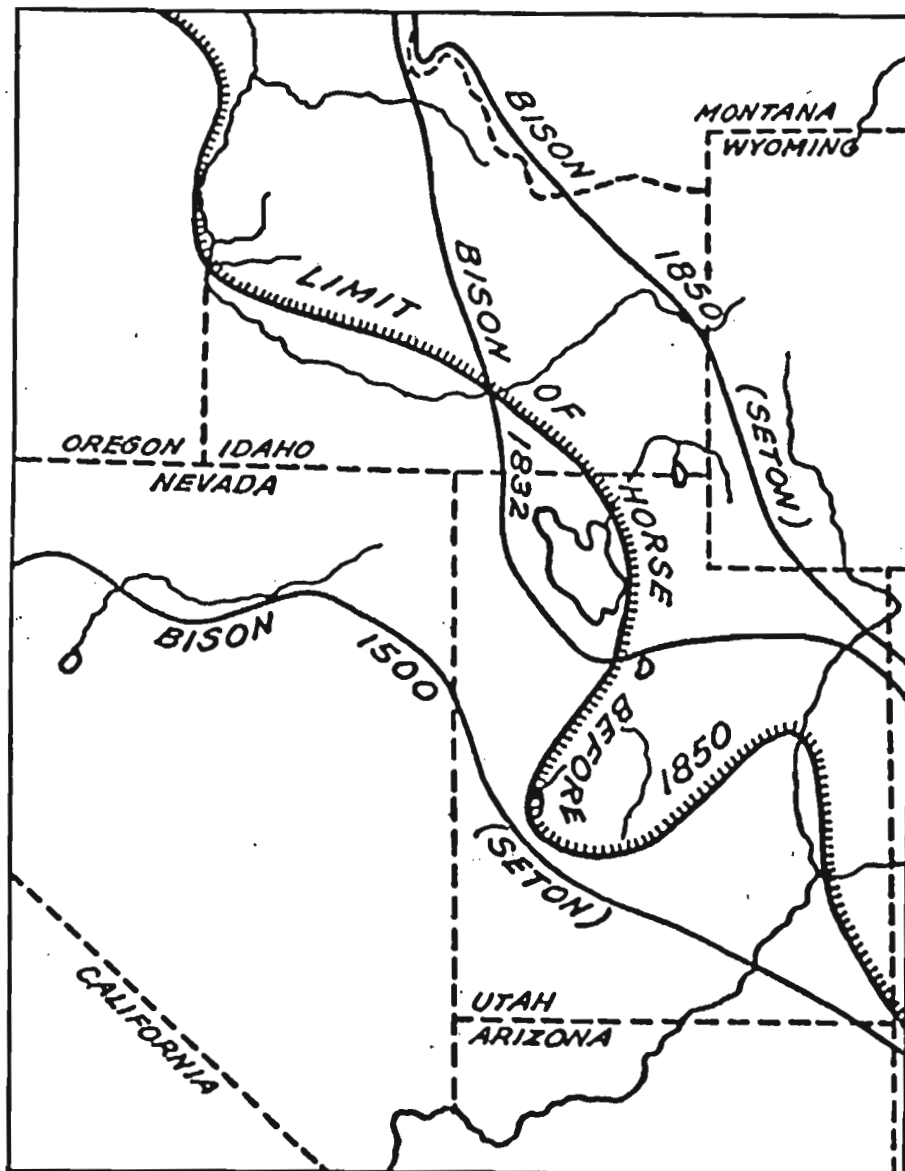


FIGURE 5.—Map of the distribution of the horse and bison.